

**EXAMPLE SCENARIO 8
Option 1**

TABLE 4.1.RME
VALUES USED FOR DAILY INTAKE CALCULATIONS
REASONABLE MAXIMUM EXPOSURE
The Dean Company

Scenario Timeframe: Future
Medium: Soil
Exposure Medium: Soil

Exposure Route	Receptor Population	Receptor Age	Exposure Point	Parameter Code	Parameter Definition	Value	Units	Rationale/ Reference	Intake Equation/ Model Name
Ingestion	Resident	Adult	Soil at Site 1	CS	Chemical Concentration in Soil	See Table 3.3	mg/kg	See Table 3.3	Chronic Daily Intake (CDI) (mg/kg-day) = CS x IR x FI x EF x ED x CF1 x 1/BW x 1/AT
				IR	Ingestion Rate of Soil	100	mg/day	EPA, 1991	
				FI	Fraction Ingested	1	--	Professional Judgment	
				EF	Exposure Frequency	350	days/year	EPA, 1991	
				ED	Exposure Duration	24	years	EPA, 1991	
				CF1	Conversion Factor	1E-06	kg/mg	--	
				BW	Body Weight	70	kg	EPA, 1991	
				AT-C	Averaging Time - Cancer	25,550	days	EPA, 1989	
				AT-N	Averaging Time - Non-Cancer	8,760	days	EPA, 1989	
	Child	Soil at Site 1	Child	CS	Chemical Concentration in Soil	See Table 3.3	mg/kg	See Table 3.3	CDI (mg/kg-day) = CS x IR x FI x EF x ED x CF1 x 1/BW x 1/AT
				IR	Ingestion Rate of Soil	200	mg/day	EPA, 1991	
				FI	Fraction Ingested	1	--	Professional Judgment	
				EF	Exposure Frequency	350	days/year	EPA, 1991	
				ED	Exposure Duration	6	years	EPA, 1991	
				CF1	Conversion Factor	1E-06	kg/mg	--	
				BW	Body Weight	15	kg	EPA, 1991	
				AT-C	Averaging Time - Cancer	25,550	days	EPA, 1989	
				AT-N	Averaging Time - Non-Cancer	2,190	days	EPA, 1989	
	Child/Adult	Soil at Site 1	Child/Adult	--	--	--	--	--	Child/Adult cancer risks will be calculated as the sum of the Child cancer risk and the Adult cancer risk.

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REASONABLE MAXIMUM EXPOSURE
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Scenario Timeframe: Future
Medium: Soil
Exposure Medium: Soil

Exposure Route	Receptor Population	Receptor Age	Exposure Point	Parameter Code	Parameter Definition	Value	Units	Rationale/ Reference	Intake Equation/ Model Name
Dermal	Resident	Adult	Soil at Site 1	CS	Chemical Concentration in Soil	See Table 3.3	mg/kg	See Table 3.3	$CDI (mg/kg\text{-}day) = CS \times CF1 \times SA \times AF \times AB \times EF \times ED \times 1/BW \times 1/AT$
				CF1	Conversion Factor	1E-06	kg/mg	--	
				SA	Skin Surface Area Available for Contact	5,000	cm ²	EPA, 1997	
				AF	Soil to Skin Adherence Factor	0.19	mg/cm ²	EPA, 1997	
				AB	Absorption Factor	chemical-specific	unitless	EPA, 1995	
				EF	Exposure Frequency	350	days/year	EPA, 1991	
				ED	Exposure Duration	24	years	EPA, 1991	
				BW	Body Weight	70	kg	EPA, 1991	
				AT-C	Averaging Time - Cancer	25,550	days	EPA, 1989	
				AT-N	Averaging Time - Non-Cancer	8,760	days	EPA, 1989	
	Child	Soil at Site 1	Child	CS	Chemical Concentration in Soil	See Table 3.3	mg/kg	See Table 3.3	$CDI (mg/kg\text{-}day) = CS \times CF1 \times SA \times AF \times AB \times EF \times ED \times 1/BW \times 1/AT$
				CF1	Conversion Factor	1E-06	kg/mg	--	
				SA	Skin Surface Area Available for Contact	3,600	cm ²	EPA, 1997	
				AF	Soil to Skin Adherence Factor	0.11	mg/cm ²	EPA, 1997	
				AB	Absorption Factor	chemical-specific	unitless	EPA, 1995	
				EF	Exposure Frequency	350	days/year	EPA, 1991	
				ED	Exposure Duration	6	years	EPA, 1991	
				BW	Body Weight	15	kg	EPA, 1991	
				AT-C	Averaging Time - Cancer	25,550	days	EPA, 1989	
AT-N	Averaging Time - Non-Cancer	2,190	days	EPA, 1989					
	Child/Adult	Soil at Site 1	--	--	--	--	--	Child/Adult cancer risks will be calculated as the sum of the Child cancer risk and the Adult cancer risk.	

EPA 1989: Risk Assessment Guidance for Superfund. Volume 1: Human Health Evaluation Manual, Part A. OERR EPA/540/1-89/002.

EPA 1991: Risk Assessment Guidance for Superfund. Volume 1: Human Health Evaluation Manual - Supplemental Guidance, Standard Default Exposure Factors. Interim Final. OSWER 9285.6-03.

EPA 1995: Assessing Dermal Exposure from Soil, Technical Guidance Manual, Region III, EPA/903-K-95-003.

EPA 1997: Exposure Factors Handbook, Volume 1. EPA/600/P-95/002Fa.